



DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

Petition for Exemption from the

Federal Motor Vehicle Theft Prevention Standard;

Fiat Chrysler Automobiles US LLC

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Grant of petition for exemption.

SUMMARY: This document grants in full the Fiat Chrysler Automobiles US LLC's, (FCA) petition for exemption of the Jeep Wrangler vehicle line in accordance with 49 CFR part 543, Exemption from Vehicle Theft Prevention Standard. This petition is granted because the agency has determined that the antitheft device to be placed on the line as standard equipment is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Federal Motor Vehicle Theft Prevention Standard. (Theft Prevention Standard).

DATES: The exemption granted by this notice is effective beginning with 2018 model year (MY).

FOR FURTHER INFORMATION CONTACT: Ms. Carlita Ballard, International Policy, Fuel Economy and Consumer Programs, NHTSA, West Building, W43-439, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590. Ms. Ballard's phone number is (202) 366-5222. Her fax number is (202) 493-2990.

SUPPLEMENTARY INFORMATION: In a petition dated June 2, 2017, FCA requested an

exemption from the parts-marking requirements of the Theft Prevention Standard for its Jeep Wrangler vehicle line beginning with MY 2018. The petition requested an exemption from parts-marking pursuant to 49 CFR part 543, Exemption from Vehicle Theft Prevention Standard, based on the installation of an antitheft device as standard equipment for the entire vehicle line.

Under 49 CFR part 543.5(a), a manufacturer may petition NHTSA to grant an exemption for one vehicle line per model year. In its petition, FCA provided a detailed description and diagram of the identity, design, and location of the components of the antitheft device for its Jeep Wrangler vehicle line. FCA stated that its MY 2018 Jeep Wrangler vehicle line will be installed with the Sentry Key Immobilizer System (SKIS) antitheft device as standard equipment on the entire vehicle line. The SKIS will provide passive vehicle protection by preventing the engine from operating unless a valid electronically encoded key is inside the cabin of the vehicle and a valid key code is detected in the ignition system of the vehicle. Key components of the antitheft device will include an immobilizer, a Radio Frequency Hub Module (RFHM), Engine Control Module (ECM), Body Controller Module (BCM), a Transponder Key/Finger Operated Button (FOB) with Integrated Key (FOBIK) and an Instrument Panel Cluster (IPC) which contains the telltale function only. According to FCA, these components work collectively to perform the immobilizer function. FCA will not provide an audible alert, however, the vehicle will be equipped with a security indicator in the instrument panel cluster that will flash if an invalid transponder key is detected. Specifically, FCA stated that its Wrangler vehicles will be equipped with a security indicator that acts as a diagnostic indicator. If the RFHM detects an invalid transponder key or if a transponder key related fault occurs, the security indicator will flash. If the RFHM detects a system malfunction or the SKIS becomes ineffective, the security

indicator will stay on. The SKIS also performs a self-test each time the ignition system is turned to the RUN position and will store fault information in its RFHM memory if a system malfunction is detected.

FCA's submission is considered a complete petition as required by 49 CFR 543.7 in that it meets the general requirements contained in 543.5 and the specific content requirements of 543.6.

In addressing the specific content requirements of 49 CFR part 543.6, FCA provided information on the reliability and durability of the device. FCA conducted tests based on its own specified standards (i.e., voltage range and temperature range) and stated its belief that the device meets the stringent performance standards prescribed. Specifically, FCA stated that its device must demonstrate a minimum of 95 percent reliability with 90 percent confidence and 100 percent system functionality prior to being shipped from the supplier to the vehicle assembly plant for installation in the vehicles. FCA also stated that each transponder key has a unique identification code that is permanently programmed into it by the manufacturer and must be programmed into the RFHM. Once a transponder key has been programmed to a particular vehicle, it cannot be used on any other vehicle.

FCA stated that the SKIS immobilizer feature is activated when the transponder key is removed from the ignition system (whether the doors are open or not) and the ignition system is in the "OFF" position. Specifically, once the SKIS is activated, only a valid transponder key that is recognized by the ignition system will disable it and allow the vehicle to start and continue to run. FCA stated that the functions and features of the SKIS are all integral to the BCM in this vehicle. The RFHM contains a Radio Frequency (RF) transceiver and a microprocessor and it

initiates the ignition process by communicating with the BCM. The RFHM and the ECM both use software that includes a rolling code algorithm strategy which helps to reduce the possibility of unauthorized SKIS disarming. The microprocessor-based SKIS hardware and software also uses electronic messages to communicate with other electronic modules in the vehicle over the Controller Area Network (CAN) data bus.

FCA further stated that the SKIS uses RF communication with an Advanced Encryption System (AES) to obtain confirmation that the transponder key is a valid FOBK for operating the vehicle. The RFHM initiates the ignition process by communicating with the BCM. The RFHM contains an RF transceiver and a microprocessor. The RFHM is paired with a Keyless Go START/STOP push button (also known as the Keyless Ignition Node (“KIN”)). The RFHM receives Low Frequency (LF) and/or RF signals from the Sentry Key transponder through a tuned RF antenna. When the Keyless Go START/STOP button is pressed on the KIN, the RFHM transmits an LF signal to the transponder key. The RFHM then waits for a RF signal response from the transponder in the FOBK. If the response received identifies the FOBK as valid, the communication between the RFHM, the BCM, and the ECM proceeds, and the ECM allows the engine to start. If the ECM receives an invalid key message or receives no message from the RFHM over the CAN data bus, the engine will be disabled. FCA further stated that its antitheft immobilizer device prevents the engine from running for more than two seconds unless a valid transponder key is recognized by the ignition system. Additionally, FCA stated that only six consecutive invalid start attempts will be permitted and that all other attempts will be locked out by preventing the fuel injectors from firing and disabling the starter.

FCA stated that it expects the Jeep Wrangler vehicle line to mirror the lower theft rate

results achieved by the Jeep Grand Cherokee vehicle line when ignition immobilizer systems were installed as standard equipment on the line. FCA stated that it has offered the SKIS immobilizer device as standard equipment on all Jeep Grand Cherokee vehicles since MY 1999. According to FCA, the average theft rate for Jeep Grand Cherokee vehicles, based on NHTSA's theft rate data for the four model years prior to 1999 (1995-1998), when a vehicle immobilizer device was not installed as standard equipment was 5.3574 per one thousand vehicles produced. This was significantly higher than the 1990/1991 median theft rate of 3.5826. However, FCA also indicated that the average theft rate for the Jeep Grand Cherokee for the nine model years (1999-2009, excluding MY 2007 and 2009) after installation of the standard immobilizer device was 2.5704, significantly lower than the median. The Jeep Grand Cherokee vehicle line was also granted an exemption from the parts-marking requirements beginning with MY 2004 (67 FR 79687, December 30, 2002). FCA further asserts that NHTSA's theft rate data for the Jeep Grand Cherokee indicates that the inclusion of a standard immobilizer device resulted in a 52 percent net average reduction in vehicle thefts. Theft rate data reported in the Federal Register notices published by the agency show that the theft rate for the Jeep Wrangler vehicle line, using an average of three MYs' data (2012-2014) is also 0.3980, which is significantly lower than the median theft rate established by the agency.

Based on the evidence submitted by FCA, the agency believes that the antitheft device for the Jeep Wrangler vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR 41). The agency concludes that the device will provide four of the five types of performance listed in 49 CFR part 543.6(a)(3): promoting activation; preventing defeat or

circumvention of the device by unauthorized persons; preventing operation of the vehicle by unauthorized entrants; and ensuring the reliability and durability of the device.

Pursuant to 49 U.S.C. 33106 and 49 CFR part 543.7(b), the agency grants a petition for exemption from the parts-marking requirements of part 541, either in whole or in part, if it determines that, based upon substantial evidence, the standard equipment antitheft device is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of Part 541. The agency finds that FCA has provided adequate reasons for its belief that the antitheft device for the vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR part 541). This conclusion is based on the information FCA provided about its device.

For the foregoing reasons, the agency hereby grants in full FCA's petition for exemption for its Jeep Wrangler vehicle line from the parts-marking requirements of 49 CFR part 541, beginning with its MY 2018 Jeep Wrangler vehicles. The agency notes that 49 CFR part 541, Appendix A-1, identifies those lines that are exempted from the Theft Prevention Standard for a given model year. 49 CFR part 543.7(f) contains publication requirements incident to the disposition of all part 543 petitions. Advanced listing, including the release of future product nameplates, the beginning model year for which the petition is granted and a general description of the antitheft device is necessary in order to notify law enforcement agencies of new vehicle lines exempted from the parts marking requirements of the Theft Prevention Standard. FCA stated that an official nameplate for the vehicle has not yet been determined.

If FCA decides not to use the exemption for this vehicle line, it must formally notify the

agency. If such a decision is made, the vehicle line must be fully marked as required by 49 CFR parts 541.5 and 541.6 (marking of major component parts and replacement parts).

NHTSA notes that if FCA wishes in the future to modify the device on which this exemption is based, the company may have to submit a petition to modify the exemption. 49 CFR part 543.7(d) states that a part 543 exemption applies only to vehicles that belong to a line exempted under this part and equipped with the anti-theft device on which the line's exemption is based. Further, 49 CFR part 543.9(c)(2) provides for the submission of petitions "to modify an exemption to permit the use of an antitheft device similar to but differing from the one specified in that exemption."

The agency wishes to minimize the administrative burden that 49 CFR part 543.9(c)(2) could place on exempted vehicle manufacturers and itself. The agency did not intend in drafting part 543 to require the submission of a modification petition for every change to the components or design of an antitheft device. The significance of many such changes could be *de minimis*. Therefore, NHTSA suggests that if the manufacturer contemplates making any changes, the effects of which might be characterized as *de minimis*, it should consult the agency before preparing and submitting a petition to modify.

Issued in Washington, DC

under authority delegated in 49 CFR part 1.95

Raymond R. Posten,
Associate Administrator for Rulemaking.

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(Signature page, Grant of Petition for Exemption, MY 2018 FCA Jeep Wrangler)

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